

Remarks

Claims 1 and 4-14 remain in this application.

Rejections under 35 USC 112

The rejections under 35 USC 112 have been obviated as claim 2 has been canceled and "finely divided" has been deleted from claim 10.

Double Patenting

The amendments provided herewith obviate the double patenting rejection. The amendments provided herewith further define the primary and secondary plasticizers such that they are not obvious in view of copending Application No. 10/393,214.

Art Rejections

None of the cited references disclose or suggest using combinations of 1) an ester of benzoic, phthalic or phosphoric acid containing no unreacted hydroxyl group with 2) a monoester of a dihydric alcohol or the unique benefit imparted to plastisols by this combination.

The Bettoli Patent

The rejection based on the Bettoli patent is respectfully traversed and reconsideration is requested. The Bettoli patent concerns decorative covering materials for floors and other surfaces. The covering material contains a selectively foamed layer, a coating of a vinyl resin composition that initially contains a foaming catalyst, and an optional topcoat of a vinyl resin as a wear layer. Representative resin compositions for the catalyst-containing layer and the topcoat are disclosed as examples G and H, respectively. Composition G contains 2-ethylhexyl adipate, and composition H contains dioctyl phthalate. Both of these esters are known plasticizers for polyvinyl chloride. These compositions also contain polyethylene glycol monolaurate. In example G this ester is identified as a surfactant on line 56 of column 11. This is followed with the statement that "various material for this purpose (a surfactant) may be employed as is well known". It is clear from this disclosure that the

monoester is not considered a plasticizer. More importantly, there is no teaching in the Bettoli patent that would lead one to use monoesters as claimed as auxiliary plasticizers in any polymer composition.

The Davidian Patent

The foregoing comments concerning the Bettoli patent are equally applicable to the cited Davidian patent, which concerns organic coating compositions for use with metal caskets. A listing of suitable plasticizers for use in these coating compositions appears in a paragraph in column 2 beginning on line 36. None of these plasticizers are monoesters of dicarboxylic acids as claimed. As in the Bettoli patent, polyethylene glycol monolaurate is disclosed as an "aid in wetting", i.e. a surfactant, on lines 4-7 of column 3.

The Rejections Under 35 USC 102 (e) and 103 (a) Based on the Nakamura Patent

The only monoesters of dicarboxylic acids disclosed in the cited patent to Nakamura patent are derived from aliphatic dicarboxylic acids. Based on the absence of any teaching by Nakamura of aromatic acid esters containing unreacted hydroxyl groups it cannot be considered obvious to substitute these aromatic acid monoesters of dihydric alcohols for the monoesters of aliphatic dicarboxylic acids disclosed by Nakamura et al., much less to combine them with esters that are free of unreacted hydroxyl groups.

The Rejection Under 35 USC 102(b) Based On The DiBella Patent

The Dibella patent is directed to two specific compounds, the mono- and dibenzoates of 2,2,4-trimethyl-1,3-pentanediol (TMPD). The patent discloses a preferred method for preparing these esters and their use as PVC plasticizers.

The monobenzoate of Dibella is unique in its ability to function as a plasticizer. This is pointed out by Dibella in the two sentences beginning on line 5 of column 4, which read "(T)he fact that the monoesters of TMPD are compatible with vinyl resins are efficient and stain-resistant plasticizers for such resins is unexpected and surprising. It is conventional wisdom in this art that ester plasticizers, in order to be

and remain compatible, should be essentially completely esterified and free from unreacted hydroxyl or carboxylic acid groups."

This statement by Dibella points out the uniqueness of Applicant's compositions, in which the monoesters containing free hydroxyl groups reduce the viscosity of a plastisol while simultaneously reducing the temperature required for fusion of the dispersed polymer particles into a unitary article and remaining compatible with the polymer. This teaching appears at the top of page 4 of the present application. There is no suggestion of this property of monoesters in the Dibella patent.

The Lang Patents ('556 and '112)

None of the Lang patents describe or suggest the combination of primary and secondary plasticizers as now claimed.

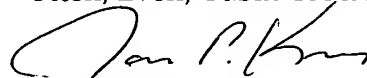
Conclusion

In summary, none of the cited references disclose or suggest using combinations of 1) an ester of benzoic, phthalic or phosphoric acid containing no unreacted hydroxyl group with 2) a monoester of a dihydric alcohol or the unique benefits imparted to plastisols by this combination. A favorable consideration and allowance of all claims with the amendments requested in this communication appear in order and are respectfully urged.

The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,

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